

178

JOURNAL  
OF  
GEOMAGNETISM  
AND  
GEOELECTRICITY

VOL. 19

1967

SOCIETY  
OF  
TERRESTRIAL MAGNETISM AND ELECTRICITY  
OF  
JAPAN

TOKYO



Digitized by the Internet Archive  
in 2024

# JOURNAL OF GEOMAGNETISM AND GEOELECTRICITY

Vol. 19, 1967

## INDEX OF AUTHORS

Cain J.C. ....	335	Ogawa T. ....	307, 377
Carleton B.J. ....	195	Ogbuehi P.O. ....	15
Carmichael R.S. ....	181	Onwumechilli A. ....	15
Coe R.S. ....	157	Oya H. ....	267
Fraser-Smith A.C. ....	377	Ozima Minoru ....	357
Fuller M.D. ....	181	Ozima Mituko ....	117, 253
Gendrin R. ....	377	Paltridge G.W. ....	297
Gough D.I. ....	203	Pitt R.P.B. ....	317
Green R. ....	317	Radoski H.R. ....	1
Gupta J.C. ....	23	Reitzel J.S. ....	203
Hagiwara Y. ....	229	Rikitake T. ....	129
Hendricks S.J. ....	335	Scheepers G.L.M. ....	155
Hirao K. ....	247, 261	Schwarz E.J. ....	91
Hiraoka K. ....	217	Singh R.N. ....	143
Hudson W.V. ....	335	Somayajulu V.V. ....	81
Hughes H.G. ....	281	Srivastava B.J. ....	289
Kamiyama H. ....	27	Strangway D. ....	357
Kawai N. ....	217	Tanaka Y. ....	307, 377
Kinoshita H. ....	77, 156, 357	Tantry B.A.P. ....	7, 81, 239, 257
Kobayashi K. ....	357	Yasuhara M. ....	377
Kono M. ....	357	Yukutake T. ....	103
Kropáček K.V. ....	323	Wadehra N.S. ....	7, 239, 257
Langel R.A. ....	335	Wasilewski P.J. ....	195
Larson E.E. ....	117, 357	Watadani K. ....	273
Misra K.D. ....	143	Watkins N.D. ....	63
Miyazaki S. ....	261	Winch D.E. ....	49
Nagata T. ....	77, 156, 357		



# JOURNAL OF GEOMAGNETISM AND GEOELECTRICITY

## TABLE OF CONTENTS

### Vol. 19, No. 1, 1967

Poloidal Axisymmetric Resonances: a separable case .....	<i>H.R. Radoski</i>	1
Attenuation Characteristics of Smooth Type Atmospheric Waveforms .....	<i>N.S. Wadehra and B.A.P. Tantry</i>	7
Preliminary Results on the Equatorial Electrojet in India .....	<i>A. Onwumechilli and P.O. Ogbuehi</i>	15
A Study of Schmidt's Phenomenon in the S-Current System and in the 10.7 cm Radio Noise Flux .....	<i>J.C. Gupta</i>	23
The Electron Density Distribution in the Lower Ionosphere Produced through Impact Ionization by Precipitating Electrons and through Photoionization by the Associated Bremsstrahlung X-Rays .....	<i>H. Kamiyama</i>	27
An Application of Oblate Spheroidal Harmonic Functions to the Determination of Geomagnetic potential .....	<i>D.E. Winch</i>	49
Unstable Components and Paleomagnetic Evidence for a Geomagnetic Polarity Transition .....	<i>N.D. Watkins</i>	63

### LETTER TO THE EDITOR

Dependence of Magnetostriction and Magnetocrystalline Anisotropy of Magnetite on Hydrostatic Pressure .....	<i>H. Kinoshita and T. Nagata</i>	77
--	-----------------------------------	----

### Vol. 19, No. 2, 1967

Absorption of Very Low Frequency Waves in the Whistler Mode Propagation at Low Latitudes .....	<i>V.V. Somayajulu and B.A.P. Tantry</i>	81
Dependence of Magnetic Properties on the Thermal History of Natural Polycrystal- line Pyrrhotite, $Fe_{0.89}S$ .....	<i>E.J. Schwarz</i>	91
The Westward Drift of the Earth's Magnetic Field in Historic Times .....	<i>Takesi Yukutake</i>	103
Study on Irreversible Change of Magnetic Properties of Some Ferromagnetic Minerals .....	<i>Mituko Ozima and E.E. Larson</i>	117
Non-dipole Field and Fluid Motion in the Earth's Core .....	<i>Tsuneji Rikitake</i>	129
Role of Electric Field Generated in the Equatorial Electrojet Region .....	<i>R.N. Singh and K.D. Misra</i>	143



## LETTER TO THE EDITOR

Noise-Cancelling Sensor for Proton Magnetometer .....	<i>G.L.M. Scheepers</i>	155
CORRECTION .....	<i>H. Kinoshita and T. Nagata</i>	156

### Vol. 19, No. 3, 1967

The Determination of Paleo-Intensities of the Earth's Magnetic Field with Emphasis on Mechanisms which Could Cause Non-Ideal Behavior in Thellier's Method .....	<i>Robert S. Coe</i>	157
Effect of Plastic Deformation on Magnetic Properties of Nickel and Interpretation of an Early Self Reversal of Magnetization Observed by Nagaoka .....	<i>R.S. Carmichael and M.D. Fuller</i>	181
Insight into the Magnetic Mineralogy of Antarctic Rocks .....	<i>P.J. Wasilewski and B.J. Carleton</i>	195
A Portable Three-Component Magnetic Variometer .....	<i>D.I. Gough and J.S. Reitzel</i>	203
Wobbling Motion of the Geomagnetic Dipole Field in Historic Time During These 2000 Years .....	<i>N. Kawai and K. Hiraoka</i>	217
Magnetic Lines of Force Deformed by Motion of a Conducting Fluid (I) .....	<i>Y. Hagiwara</i>	229
Amplitude Spectra of Reflection Type Atmospheric .....	<i>N.S. Wadehra and B.A.P. Tantry</i>	239
Electron Temperature in Aurora .....	<i>K. Hirao</i>	247

## LETTER TO THE EDITOR

Magnetic Properties of Manganese Nodules Associated with Dredged Submarine Basalts .....	<i>M. Ozima</i>	253
Audio Frequency Spectra of K Changes in a Lightning Discharge .....	<i>N.S. Wadehra and B.A.P. Tantry</i>	257

Japanese National Report Presented to the 14th Assembly of IAGA, IUGG.

### Vol. 19, No. 4, 1967

Relation between Sunspot Number and Charged Particle Density in the Upper Ionosphere .....	<i>K. Hirao and S. Miyazaki</i>	261
Irregular Type Sporadic-E Observed by Rocket Borne Gyro-Plasma Probe at a Temperate Latitude .....	<i>H. Oya</i>	267
New Emission Mechanism of Oxygen Green Line $\lambda$ 5577 in a Glow Discharge .....	<i>K. Watadani</i>	273

Current Moments at ELF of Lightning Discharges Associated with a Mature Tropical Hurricane.....	<i>H.G. Hughes</i>	281
Effects of Thunderstorms and Earthquakes on the Hyderabad Magnetographs .....	<i>B.J. Srivastava</i>	289
Universal Aspects of Atmospheric Electricity .....	<i>G.W. Paltridge</i>	297
Balloon Measurement of Atmospheric Electric Potential Gradient .....	<i>T. Ogawa and Y. Tanaka</i>	307
Suggested Rotation of New Guinea .....	<i>R. Green and R.P.B. Pitt</i>	318
Thermal Changes in the Magnetic Properties of an Anomalously Magnetic Mineral .....	<i>V. Kropáček</i>	323
A Proposed Model for the International Geomagnetic Reference Field-1965 .....	<i>J.C. Cain, S.J. Hendricks, R.A. Langel and W.V. Hudson</i>	335
Paleomagnetism of Pliocene Basalts from the Southwestern U.S.A. .....	<i>M. Kono, K. Kobayashi, M. Ozima, H. Kinoshita, T. Nagata, E.E. Larson and D. Strangway</i>	357
LETTER TO THE EDITOR		
Worldwide Simultaneity of Occurrence of a Q-type ELF Burst .....	<i>T. Ogawa, Y. Tanaka, M. Yasuhara, A.C. Fraser-Smith and R. Gendrin</i>	377

